

# **FE302 ADVANCED FACILITIES ENGINEERING**


## **FLEX TOPIC 8,**

### **ENCROACHMENT and COMPATIBILITY**


Given the encroachment or intervention by external activities, synthesize and assess the strategy that is used to manage community expectations to meet mission requirements

- Contrast various approaches to successfully manage the acquisition of real estate assets in the presence of external encroachment
- Assess the required elements to determine acceptability of the proposed real estate acquisition strategy
- Identify the various outside entities (stakeholders, congressional representatives, public officials) and the power of their influence impacting the FE management of real estate


# Way Forward




What is encroachment?




Why is it important?



How do we mitigate encroachment?



What about the future?



Class discussion  
and scenarios



# Encroachment - Defined

Two common definitions:

- “The cumulative result of any and all outside influences that inhibit normal military training.”
- “[I]s any outside activity, law, or pressure that affects the ability of military forces to train to doctrinal standards or to perform the mission assigned to the installation.”

- Service requirements remain constant -




- Competing use of land, sea and air assets

So, what categories of encroachment are there?



# Understanding Encroachment

- Endangered species habitat (previously undefined)
- Explosive safety arcs and footprints
- Competition for electro magnetic frequency spectrum
- On shore and offshore energy development
- Competition for air, land and sea space
- Air and noise pollution
- Urban growth and development near installations
- Scarce resources
- Wetlands and maritime interests
- Foreign interests, mergers, acquisitions and proximity to Army, Navy or Air Force assets



Why is it important?



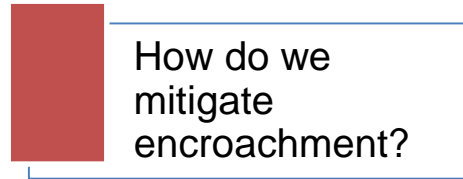
# Mission Impact

- Creating avoidance areas limits training options
- Reduced usage days and operating hours
- Prohibited training and testing events
- Reduced access to ranges and OPAREAS
- Segmented training/testing reduces realism
- Limited use of new technology
- Restricted flight altitude and air speeds
- Inhibited new tactics developments
- Reduces live fire proficiency
- Restricted night and all-weather ops and trng
- Increases security risks
- Increases direct and indirect costs in executing missions





# How to Mitigate?



Example: What if mission requirements create a larger foot print?



## Trends

- Navy has established a USN HQ component, TF for Compatibility and Readiness (OPNAV N4)
  - Provides Navy-wide coordination for compatibility issues incl foreign issues
- Army Reg 200-1 names ACSIM in lead role
  - Establishes the ACUB process (Army compatible use buffer)

*Encroachment is being redefined in terms of  
COMPATILITY issues*



# New Missions and Real Estate

- What are the three components of the real estate life cycle?
- **Answer: Acquisition, management, and disposal**
- What are the categories of real estate that can be purchased?
- **Answer: Fee simple title, easement, or lease**
- What is fee simple title:
- **Answer: Full ownership of real estate**
- What is an easement?
- **Answer: It is the right to use the land of another for a special purpose or the right to restrict an owner's use of land for certain purposes that is incompatible with a military mission.**
- What is a lease?
- **Answer: It is the right of exclusive possession of real estate for a specified period and usually for a specified time.**

**What else could we do to deal with encroachment?**



- Engage community during all levels of planning
- Designate a person to be Commander's rep with the community – Community Planning Liaison Officer (CPLO)
- Communicate, communicate, communicate (Internally and externally)

## The following documents may Address encroachment and compatibility issues:

- *Air Installation Compatibility Use Zones (AICUZ)*
- *Range Air Installations Compatibility Use Zones (RAICUZ)*
- *Encroachment Action Plan (EAP)*
- *Joint Land Use Study (JLUS)*
- *The Integrated Natural Resources Management Plan (INRMP)*
- *Base Appearance Plan*
- *The Regional Shore Infrastructure Program (RSIP)*
- *The Integrated Cultural Resources Management Plan (ICRMP)*
- *Base Transportation Plan*

Community plans that the CPLO should be aware of:

- *The Regional Planning Council or Council on Government*
- *Transportation Plans (Highway expansion planning)*
- *Ports and airports*
- *Historical/cultural regulations (SHPOs)*
- *Rail (freight and commuter)*
- *Economic development plans, etc.*
- *The Chamber of Commerce*
- *Local supporters for Military (usually)*
- *Changes to the Zoning Ordinances*

# What else?


The CPLO will need to be knowledgeable about the following community governmental documents:

- Code of Ordinances (City or County)
- Planning and Zoning Ordinances
- Future Land Use Plan or Comprehensive Plan
- Regional and Local Transportation Plans
- Port Plans (could be part of the Regional Transportation Plan)
- Airport Plans (could be part of the Regional Transportation Plan)
- Community Redevelopment Plans
- Historic District Plans
- State laws regulating Land Use and protecting Military bases
- School Board/District plans
- Utility Plans
- Economic Development Plans
- Parks and Recreation Plans

## 5-10 Year comprehensive plan

- Involve community in all forums
- Educate the community on your mission and why your future plans are important to them
- Get “top cover” from CO (higher headquarters) if you need to discuss contentious issues with the community
- Attend community planning/zoning meetings



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What about the  
future?

- Solar energy – glint/glare issues for aviation
- Electronic metering for water and electricity usage
- Electronic frequency – interfering effect of increased use of cell phones and metering transmissions
- Wind power generation – may impact bird migration routes and air operations
- Power line electromagnetic interference
- Increasing use of drones



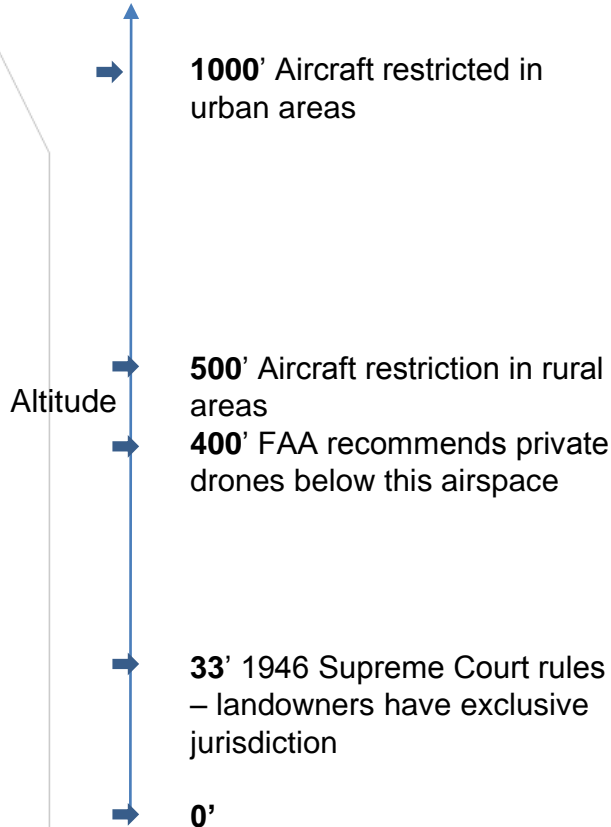
# Wind Turbines

- Require DoD NDAA Sec 358 formal and informal review
- High Risk of Adverse Impact Zones (HRAIZ)
- May cause interference with:
  - Early Warning Radar
  - Air surveillance radar
  - Over-the-horizon radar, based on:
    - Signal paths
    - Side lobes
    - Wave length
    - Clutter rejection
    - Minimum altitudes
    - Minimum elevations

*How tall are the big turbines?*



# Drone Encroachment



“The FAA largely disregarded the 500 feet above the ground for years but the agency now says the rise of drones makes ALL airspace down to the ground “navigable” and subject to its exclusive authority.”

- 700,000 drones will be sold in the US this year, up 63% from 2014
  - Pilots spotted 650 drones thru Aug, up from 238 in all of 2014
- Wall Street Journal 19 Oct 2015*

- Teams will be assigned scenarios (land, sea or air)
- Discuss among the team possible resolutions
- Time frame: 30 minutes
- Briefing salient matters using format provided



# Encroachment Scenario Exercise

1. What types of encroachment are likely to be encountered in the following scenarios?
2. If appointed to a position in the installation where you are responsible for addressing and recommending resolutions to the varied encroachments, what actions would you take? What organizations could you contact?
3. How would you set up a way to deal with encroachment at your installation for the next 5-10 years? How should installations address encroachment in a comprehensive way?



# Land Based Scenario

Your service has decided to acquire and field a new version of the Assault Breacher Vehicle (ABV) on your base. 10 ABVs, with the soldiers and associated equipment will be delivered to your base within the next 12 months. The ABV chassis is similar to the M1A1 Abrams Main Battle tank. The chassis was modified to accommodate a mine clearing blade (15' wide plow) and a mine clearing, rocket launched, explosive line charge. Your base does not currently have the capacity for the use and training ranges for the plow and the line charge, so you will be responsible for the FE portion of a plan to receive train and operate the system. Your new commander is meeting with the town mayor next week and asks for an assessment in the form of a point paper that he can take with him.



# Navy Seaport/Aviation Scenario

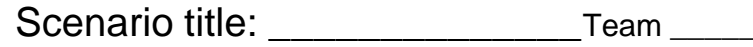
- Carrier air wing is relocating jets to a new base. Currently, base does not have jet aircraft. Relocation will introduce 2,500 + personnel plus family members to the local area. New aircraft will require new maintenance facilities and will conduct day/night flight operations.
- What encroachment issues might be faced? Resolution?





# Joint Base Scenario

The US Air Force at JB Zorn has decided to expand the base to accept a fighter wing of the F35 Joint Strike Fighter at the base. The commander turns to the FE organization and wants to know of the potential impact of the decision on the community or any actions of the community that might impact implementation. Since the commander is meeting with the local mayor later today, you, as FE, must coordinate a point paper listing potential impacts on the local community caused by expanded base operations. Your point paper is required before the commander leaves for the meeting.





# References

- NDAA (PL 11-383) The Mission Compatibility Evaluation Process CY 2013 Section 358(f)
- DODINST 4165.57 Air installations Compatible Use Zones (1977)
- DODINST 4715.02 Regional Environmental Coordination (2009)
- DOD Dir. 3200.15P Sustainment of Ranges and OPAREAS (2003)
- DODINST 3030.3 Joint Land Use Study Program (2004)
- AR 200-1, The Environmental Protection and Enhancement 17 Dec 2007
- OPNAVINST 11010.40 Encroachment Management